

McIntosh

C 22



SERVICE INFORMATION

STARTING WITH SERIAL NO. 10A01

McINTOSH LABORATORY INC. 2 CHAMBERS STREET BINGHAMTON, NEW YORK

C 22

ELECTRICAL SPECIFICATIONS

Frequency Response
+0.5 to -0.5 dB, 20Hz to 20,000Hz

Distortion
Less than 0.2% at 10 volts output
Less than 0.02% at 3 volts output

Input Sensitivity (phono 1, phono 2, tape head)
2 millivolts for 2.5 volts output at 1kHz

Input Sensitivity (Microphone)
2.5 millivolts for 2.5 volts output

Input Sensitivity (aux, tape, tuner)
0.25 volts for 2.5 volts output

Hum And Noise (phono 1, phono 2, tape head)
74 dB below 10 millivolts input

Hum And Noise (aux, tape, tuner)
85 dB below rated output

Output (main)
2.5 volts with rated input. Up to 10 volts
can be developed without distortion.

Output (tape)
0.25 volts with rated input. Phono input
signal of 10 millivolts produces 1.25 volts
output.

Output (L & R)
1.0 volts with rated input on both channels.
A level control adjusts output.

Bass Control
±20 dB at 20Hz

Treble Control
±20 dB at 20,000Hz

LF Filter
Flat or sharp cutoff below 50Hz (down 30 dB @ 20Hz).

HF Filter
Flat or sharp cutoff above 5000Hz (down 30 dB @ 20,000Hz).

Unless otherwise specified, resistance values are in ohms, 1/2 watt, and 10% tolerance. Capacitance values smaller than 1 are in microfarads (μF); values greater than 1 are in picofarads (pF). Resistors marked with * are $1/4W$.

The terminal numbering of rotary switches and printed circuit board wires is for reference only.

All voltages are measured under the following conditions:

1. Use of an 11 megohm input impedance VTVM
2. All voltages $\pm 10\%$ with respect to ground
3. AC input at 117 volts, 50/60 cycles
4. No signal at input terminals
5. Front panel controls at normal positions

LEFT CHANNEL

NOTE 3

LEFT CHANNEL INPUTS

AUX

TAPE

TUNER 1

TUNER 2

PHONO 1

PHONO 2

MIC

TAPE HD

MONITOR INPUT

TAPE OUTPUT

LEFT TAPE

RIGHT TAPE

S2-4 REAR

S2-4 FRONT

MONITOR

RECORD

PLAYBACK

RECORD

PLAYBACK

S2-3 REAR

S2-3 FRONT

MONITOR

NORMAL

NOTE 1

R14 1M

R10

47K

R12

47K

R15 1M

R11

47K

R13

47K

R17 1M

R21

47K

R23

22M

R25 1M

R31

820

R35 330K

R37 330K

R39 1M

R41 47K

R40 47K

R42 47K

R43 5%

R44 5%

R45 5%

R46 5%

R47 5%

R48 5%

R49 5%

R50 5%

R51 5%

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R256 5%

R257 5%

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R263 5%

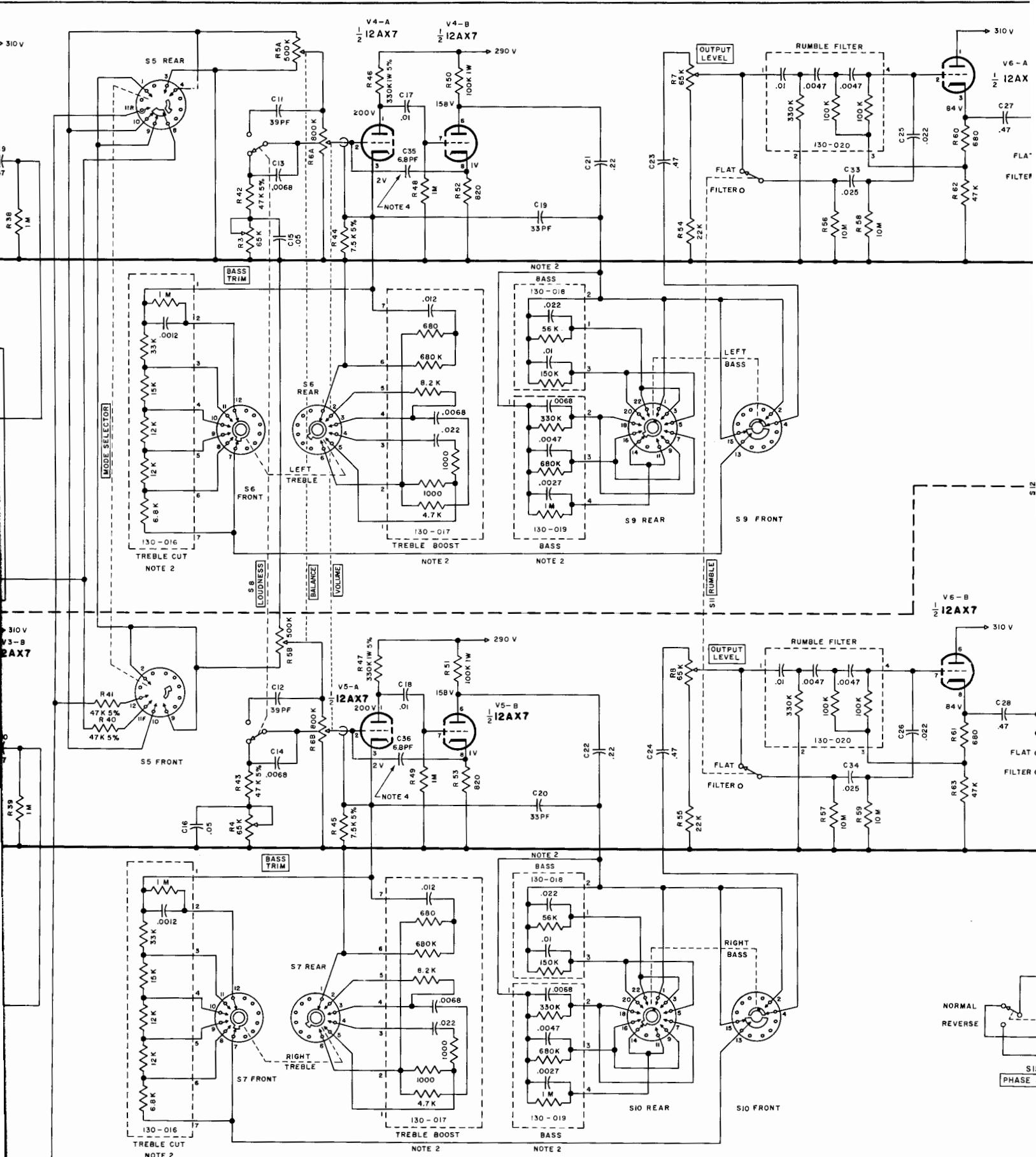
R264 5%

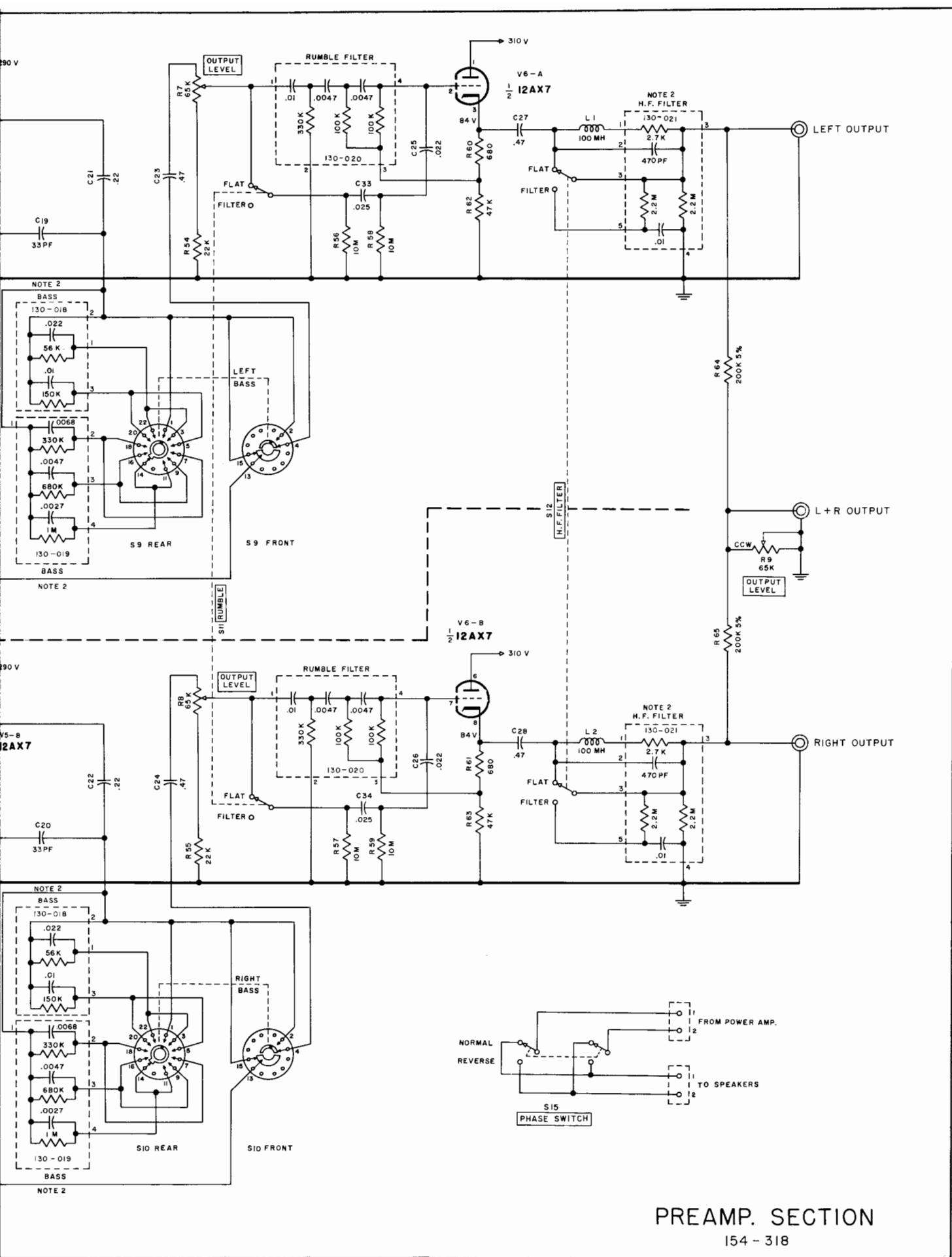
R265 5%

R266 5%

R267 5%

R268 5%





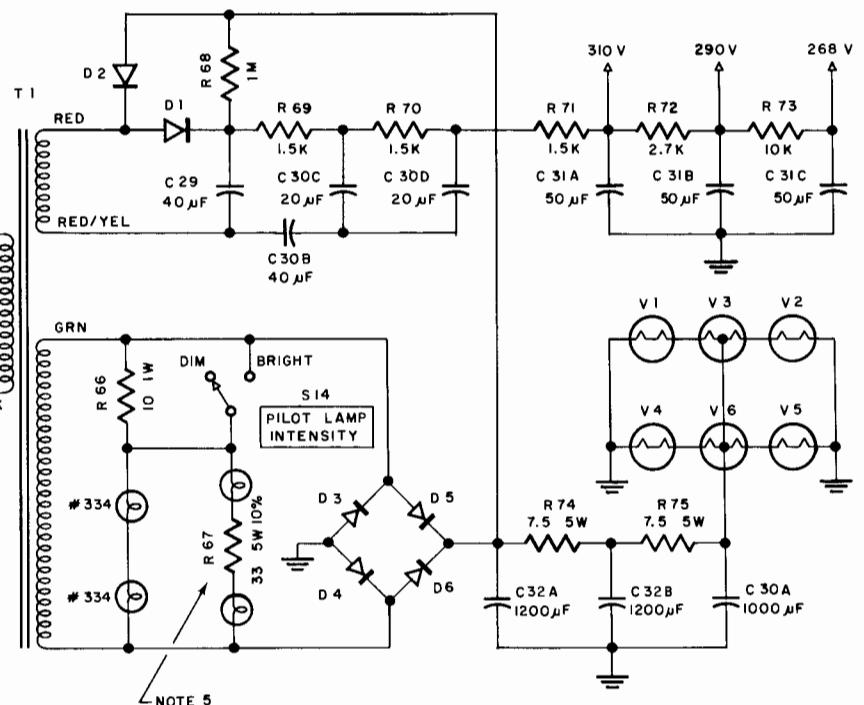
REPLACEMENT

All parts not listed are obtainable from radio parts jobbers.

Replacement parts may be obtained by PART NUMBER from:

McIntosh Laboratories
Customer Service
2 Chambers Street
Binghamton, New York
(telephone 607-)

1. In early units C3 & 4 were 50 μ F.
2. C22's built before 1965 used circuit modules made by Erie Electronics. In 1965, we changed to Sprague Electric Co. The Sprague modules are electrically equivalent to the Erie modules but differ mechanically. The newer Sprague modules are used for replacement when servicing early C22 units. For data on replacing the old Erie modules with the Sprague modules, refer to McIntosh Service Bulletin #108.
3. In early units R76 thru R83 do not appear.
4. In early units C35 & 36 do not appear.
5. In early units R67 was 50 ohms.



POWER SUPPLY

Symbol Number	Descript	CAPACITOR
C3,4	Elect.	100 μ
C29	Elect.	40 μ
C30	Elect.	100 μ
C31	Elect.	50 μ
C32	Elect.	120 μ
		300 μ
DIODE		
D1,2	Se. rectifier	
D3,4	Si. rectifier	
D5,6	Si. rectifier	
FUSE		
F1	Fuse	1 amp
CHOKES		
L1,2	Choke	100 mH
POTENTIOMETER		
R1,2	Tape equal.	
R1,2	Tape equal.	
R3,4	Bass trim	
R3,4	Bass trim	
R5	Balance control	
R6	Volume control	
R7,8,9	Output level	
R7,8,9	Output level	
RESISTOR		
R16,17	Low noise	33
R20,21	Low noise	1.
R46,47	Low noise	33
R67	Wirewound	33
R74,75	Wirewound	7.

REPLACEMENT PARTS

All parts not listed are common items obtainable from radio parts jobbers.

Replacement parts may be obtained when ordered by PART NUMBER from:

McIntosh Laboratory Inc.
Customer Service Department
2 Chambers Street
Binghamton, New York 13903
(telephone 607-723-3512)

CAPACITORS

Symbol Number	Description	Part Number
C3,4	Elect. 100 μ F 3V	066-047
C29	Elect. 40 μ F 200V	066-049
C30	Elect. 1000/40/20/20 μ F 25/200/350/350V	066-037
C31	Elect. 50/50/50 μ F 350/350/300V	066-033
C32	Elect. 1200/1200 μ F 30/30V	066-029

DIODES

D1,2	Se. rectifier	070-005
D3,4	Si. rectifier	070-014
D5,6	Si. rectifier	070-014

FUSES

F1	Fuse 1 amp	089-002
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CHOKES

L1,2	Choke 100 mH	122-004
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POTENTIOMETERS

R1,2	Tape equal. (1/2 Dia.)	134-059
R1,2	Tape equal. (5/8 Dia.)	134-186
R3,4	Bass trim (1/2 Dia.)	134-059
R3,4	Bass trim (5/8 Dia.)	134-186
R5	Balance control	134-061
R6	Volume control	134-060
R7,8,9	Output level (5/8 Dia.)	134-186
R7,8,9	Output level (1/2 Dia.)	134-059

RESISTORS

R16,17	Low noise 330K	5% 1W 144-005
R20,21	Low noise 1.8K	5% 1/2W 144-002
R46,47	Low noise 330K	5% 1W 144-005
R67	Wirewound 33 ohm	10% 5W 139-007
R74,75	Wirewound 7.5 ohm	10% 5W 139-010

SWITCHES

S1	Tape jacks switch	146-053
S2	Input selector switch	146-049
S3	Tape switch	148-006
S4	Comp. switch	148-006
S5	Mode selector switch	149-108
S6,7	Treble control switch	146-052
S8	Loudness switch	148-006
S9,10	Bass control switch	146-051
S11	Rumble switch	148-006
S12	H.F. filter switch	148-006
S13	Power switch	148-005
S14	Pilot lamp switch	148-003
S15	Phase switch	148-007
TRANSFORMERS		
T1	Power transformer	159-019
MODULES		
	Treble cut	130-016
	Treble boost	130-017
	Bass, upper	130-018
	Bass, lower	130-019
	Rumble filter	130-020
	H.F. filter	130-021
	Phono equalization	130-026
LAMPS		
	#334 (indicator)	058-003
	Festoon (indicator glass)	058-033
FRONT PANEL & TRIM		
	Front panel	043-359
	Front panel glass	016-034
	End cap, right	018-043
	End cap, left	018-044
	Volume control knob	043-253
	Mode selector knob	043-253
	Input selector knob	043-253
	Balance knob	043-253
	Bass control knob	043-428
	Tape jacks knob	043-428
	Treble control knob	043-428
	Rocker switch knob	090-007
	Level set knob	090-010

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	Level set knob	090-010

MOUNTING SYSTEM		
	Shelf bracket (right)	043-592
	Shelf bracket (left)	043-593
	Mounting template #100	038-179
	Hardware package	043-448
MISCELLANEOUS ITEMS		
	Line cord	170-021
	Fuse holder	178-001
	Shipping carton	033-027
	Owners manual	038-027
	Plastic feet	017-041
	Shorting plug	127-001
	Indicator glass	016-036
	Audio cable (6')	170-015
	Audio cable (1 phone, 1 phono)	170-016